ENGINEERING STATEMENT
IN SUPPORT OF OPPOSITION TO
WKMG-DT, ORLANDO, FLORIDA
ELECTION OF CHANNEL 15
ON BEHALF OF
WATERMAN BROADCASTING CORP. OF FLORIDA
LICENSEE OF
WBBH-DT, FORT MYERS, FLORIDA

MARCH 2005

COHEN, DIPPELL AND EVERIST, P.C. CONSULTING ENGINEERS RADIO AND TELEVISION WASHINGTON, D.C.

# COHEN, DIPPELL AND EVERIST, P. C.

City of Washington	)			
District of Columbia	) ss )			
Donald G. Everist, b	peing duly sworn upon his oath, deposes and states that:			
He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;				
That his qualification Commission;	ons are a matter of record in the Federal Communications			
That the attached er and direction and	ngineering report was prepared by him or under his supervision			
	herein are true of his own knowledge, except such facts as are and belief, and as to such facts he believes them to be true.			
	Donald G. Everist  District of Columbia  Professional Engineer  Registration No. 5714			
Subscribed and sworn to b	pefore me this			
PE OLD BROWN	Notary Public  My Commission Expires: 2/28/2008			
Para a second	/ /			

# COHEN, DIPPELL AND EVERIST, P. C.

City of Washington	) ) aa
District of Columbia	) ss )
Martin R. Doczkat be	ing duly sworn upon his oath, deposes and states that:
engineer at Cohen, Dippell ar	rical engineer of the Pennsylvania State University, and is a staff and Everist, P.C., Consulting Engineers, Radio - Television, with ., Suite 1100, Washington, D.C. 20005;
That the attached engineerion and	neering report was prepared by him or under his supervision and
	erein are true of his own knowledge, except such facts as are stated ef, and as to such facts he believes them to be true.
	MRDUK
	Martin R. Doczkat
Subscribed and sworn to before	ore me this $15^{+1}$ day of March, 2005.
	Call huar
W CAROL	Notary Public
TO 0	My Commission Expires: 2/28/2008

This engineering statement is prepared on behalf of Waterman Broadcasting Corp. of Florida, licensee of WBBH-DT, Fort Myers, Florida, in support of an opposition to WKMG-DT's submission requesting authority to operate on Channel 15. WKMG-DT is licensed to Orlando, Florida.

#### <u>History</u>

WBBH-DT is licensed to operate on Channel 15 with 1000 kW maximum ERP at a HAAT of 453.9 meters (FCC File No. BLCDT-20030620AAA).

WKMG-DT certified in FCC Form 381 to operate pursuant to its authorized DTV facility (FCC File No. BLCDT-20010515ABB). In its submission, WKMG-DT specified Channel 15 in FCC Form 382. Channel 15 was not and has not been authorized to WKMG-DT.

The following provides an assessment using Longley-Rice of the impact of WKMG-DT's proposed Channel 15 operation to the licensed facility of WBBH-DT.

#### **Interference Analysis**

WKMG-DT is licensed to operate on Channel 58 with a maximum visual horizontal effective radiated power ("ERP") of 1000 kW directional at a height above average terrain ("HAAT") of 516 meters (FCC File No. BLCDT-20010515ABB). WKMG-DT certified it would build DTV facilities pursuant to the aforementioned DTV licensed facility in FCC Form 381. WKMG-DT elected Channel 15 in FCC Form 382. Accordingly, WKMG-DT proposes to construct DTV facilities on Channel 15 that are identical with its current DTV operation on Channel 58. For the following Channel 15 Longley-Rice analysis for WKMG-DT, the following other parameters (channel and ERP) have been used as abstracted by CDBS.

WKMG-TV DT LIC	C 58	1000.000	525.0 m	28°36'35"	BLCDT20010:	515ABB
ORLANDO, FL		3 D	516.0 m	81°03'35"	71293	566919
POST-NEWSWEEK STATIONS, ORLANDO, INC.					DIE	19089

A map of the interference caused by the proposed WKMG-DT on Channel 15 to the authorized WBBH-DT facility is included as Exhibit E-1. The WKMG-DT operation analyzed the same HAAT and utilizes a directional antenna and antenna azimuth pattern used in the DTV license and is included for convenience as Exhibit E-2. The coordinates for the proposed WKMG-DT Channel 15 operation are the same as used in the DTV license and are as follows:

North Latitude: 28° 36′ 35″

West Longitude: 81° 03' 35"

(NAD-27)

#### **Dipole Factor**

WKMG-DT operates on Channel 58 with 1000 kW directional. Operation on Channel 15 requires a dipole factor<sup>1</sup> adjustment, therefore, a reduction in ERP at the radio horizon will be necessary. This will result in an ERP of 422.7 kW directional.

### **Longley-Rice Analysis**

A study of the predicted interference caused by the proposed WKMG-DT service has been performed using a version of the Longley-Rice program as described in OET Bulletin No. 69 (July 2, 1997) and the Public Notice, "Additional Application Processing Guidelines for Digital Television (DTV)" (August 1998) using the following parameters:

<u>Channel</u>	<u>Call</u>	City/State	ERP kW	HAAT m	RCAMSL m
15	WKMG-DT	Orlando, FL	422.7 DA	516	525

The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output handling) for the program to run on a Windows 98/Intel platform. Comparison of service/interference areas and populations indicates that this model closely matches the FCC's

<sup>&</sup>lt;sup>1</sup>Table II OET Bulletin 69.

evaluation program. Best efforts have been made to use data and calculations identical to the FCC's program. Any slight differences are attributable to compiler, operating system and/or processor characteristics. The effect of any variance in calculated population values versus the FCC's program is minimized when differencing a given model's results, such as calculating new interference as total interference less baseline interference. Any variance effect is further reduced when using ratios of calculated population values such as measuring the incremental population affected as a percent of the total population served. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 4 km² using 3-second terrain data sampled approximately every 1.0 km at one degree azimuth intervals with 2000 Census centroids.

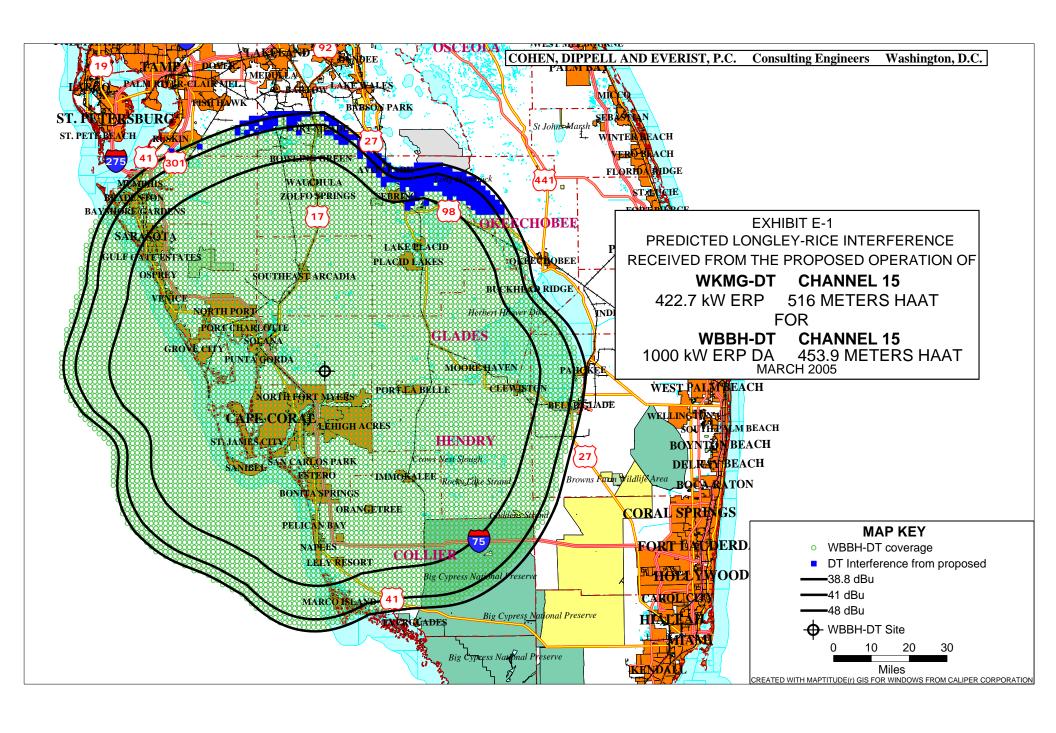
Stations were selected according to the FCC Public Notice dated August 10, 1998 and entitled, "Additional Application Processing Guidelines for Digital Television", which outlines the station selection criteria "culling distances" for considering potential interference scenarios.

The above only considers all outstanding construction permits and licensed operations abstracted from the FCC engineering data base dated March 15, 2005.

#### **Allocation Situation**

In accordance with the Report and Order in MB Docket 03-15, the proposed operation causes more than 0.1% new interference to WBBH-DT despite the fact that an interference agreement has not been reached. Specifically, the proposed WKMG-DT operation causes 1.36% new interference (see Table I) to the certified licensed DTV facility, WBBH-DT (FCC File No. BLCDT-20030620AAA). Therefore, the proposed operation is not in compliance with the *Report and Order* in ET Docket 03-15 adopted August 4, 2004,<sup>2</sup> and must be dismissed.

<sup>&</sup>lt;sup>2</sup>See Paragraph 46.



## EXHIBIT E-2 LICENSED DIRECTIONAL AZIMUTH PATTERN FOR WKMG-DT, CHANNEL 58, ORLANDO, FL (FCC FILE NO. BLCDT-20010515ABB)

STATION: WKMG-TV (channel 58) in ORLANDO, FL

TYPE: DT - LIC

FILE NO: BLCDT - 20010515ABB

REF AZ: 0 ERP: 1000

## AZIMUTH FIELD

_	
0	0.759
10	0.669
20	0.638
30	0.638
40	0.669
50	0.697
60	0.649
70	0.635
80	0.649
90	0.697
100	0.768
110	0.809
120	0.779
130	0.731
140	0.759
150	0.859
160	0.961
170	1
180	0.941
190	0.832
200	0.783
210	0.828
220	0.897
230	0.939
240	0.946
250	0.942
260	0.946
270	0.939
280	0.857
290	0.828
300	0.783
310	0.832
320	0.941

330

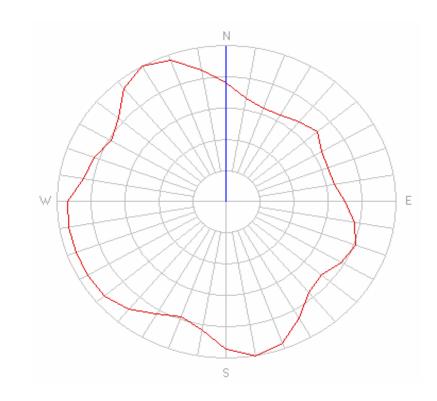
340

350

1

0.961

0.859



# TABLE I PREDICTED LONGLEY-RICE COVERAGE FOR THE LICENSED OPERATION OF WBBH-DT INCLUDING INTERFERENCE FROM THE PROPOSED WKMG-DT CHANNEL 15 422.7 KW ERP 516 METERS HAAT MARCH 2005

	<u>Population</u>	<u>Area</u> (km²)
WBBH-DT service population inside the noise-limited contour	1,643,064	36098.7
Existing NTSC interference from WUSF-TV, Tampa, FL	140	12.1
DTV interference from the proposed WKMG-DT	22,290	863.8
Total Interference	22,430	875.9
Percentage new interference caused by proposed WKMG-DT	1.36%	